

Unlink <modname> Usage : Unlinks module(s) from memory @WCREATE  
 Syntax: Wcreate [opt] or /wX [-s=type] xpos ypos xsiz ysiz fcol bcol [bord]  
 Usage : Initialize and create windows Opts : -? = display help -z = read

command  
 lines from  
 stdin -s=type  
 = set screen  
 type for a  
 window on a

## AUSTRALIAN OS9 NEWSLETTER

new screen  
 @ X M O D E  
 Syntax :  
 X M o d e  
 <devname>  
 [params]

Usage : Displays or changes the parameters of an SCF type device  
 @COCOPR Syntax: cocopr [<opts>] [<path> [<opts>]] Function: display file  
 in specified format gets defaults from /dd/sys/env.file Options : -c set columns  
 per page -f use form feed for trailer -h=num set number of lines after  
 header -l=num set line length -m=num set left margin -n=num set starting  
 line number and incr -o truncate lines longer than lnlen -p=num set number  
 of lines per page -t=num number of lines in trailer -u do not use title

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**Brisbane OS9 Users Group**

-u=title use specified title -x=num set starting page number -z[=path] read file  
 names from stdin or <path> if given @CONTROL Syntax: control [-e] Usage  
 : Control Panel to set palettes, mouse and keyboard parameters and monitor

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type for  
 Multi-Vue.  
 Selectable from  
 desk utilities  
 menu as the  
 Control Panel.  
 Opts : -e =  
 execute the  
 environment file  
 @ G C L O C K  
 Syntax: gclock  
 Usage : Alarm  
 clock utility for  
 Multi-Vue.

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Selectable from desk utilities menu as Clock. @GCALC Syntax: gcalc Usage :  
 Graphics calculator utility for Multi-Vue. Selectable from desk utilities menu as

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**Number 10**

Calculator. @GCAL Syntax: gcal Usage : Calendar/Memo book utility for  
 Multi-Vue. Selectable as Calendar from the desk utilities menu. @GPRINT

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**AUSTRALIAN OS9 NEWSLETTER**  
**Newsletter of the National OS9 User Group**  
**Volume 6 Number 10**

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**EDITOR :** Gordon Bentzen  
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**SUPPORT :** Brisbane OS9 Level 2 Users Group.

### **CONGRATULATIONS !**

Our congratulations are extended to the organisers of the recent **CoCoFest** held in Melbourne 24th and 25th October 1992.

The success of this **Australian CoCoFest** is the result of the efforts of Fred Remin, his co-organiser John Ikin and the many other people who have contributed in no small way.

The National OS-9 Usergroup was represented by Bob Devries, Don Berrie and myself, Gordon Bentzen. Unfortunately, our librarian, Jean-Pierre Jacquet, was not able to be there due to some last minute business commitments.

For those who may be interested, we decided to drive the 1500 kilometres to Melbourne, given that we wanted to take an MM/1 and at least one CoCo 3 with hard drives and all.

We left Brisbane Thursday 22nd October at 5:30am and stopped over in West Wyalong some eleven hours later. This put us in Melbourne, early afternoon on Friday 23rd.

For the return trip we left Melbourne early in the morning of Monday 26th and arrived in Brisbane just after lunch on Tuesday 27th after an overnight stop in Narrabri NSW. Total distance travelled, 3185 kilometres.

The **COCOFEEST** one and a half day programme catered for the many interests of CoCoists and OS-9ers and included:-

- \* Discussion, software & hardware availability.
- \* BASIC tutorial by Stan Blazejewski (Peninsula CoCo Usergroup, and Sysop PCCC Bulletin Board).
- \* Word Processors - hints and tips by John Ikin.
- \* Open Forum - chaired by Fred Remin.
- \* The MM/1, OS9 and OSK by Andrew Donaldson.

As well as these informative lectures and discussions, our need for food and drink was well catered for.

We saw sixteen or seventeen machines set up including two MM/1s, and estimate that some seventy or eighty

people attended over the week-end, including at least two from Sydney.

To the organisers, helpers and supporters for the effort in making the Australian CoCoFest a reality and a success - Thankyou!

We also learned that Fred Remin is on the move to Canungra Queensland in the near future from where he will continue the production of the CoCo-link magazine commencing 1993. We understand that this is by arrangement with Robbie Dalzell of Noarlunga South Australia, and we wish Fred every success in this venture.

In our edition next month, December, we expect to have some more details of the CoCoFest as Andrew Donaldson has promised an article.

### **PLAY THOSE SOUND FILES**

There is an OS-9 utility in our P.D. Library "PLAY" which caused some interest amongst the OS-9ers at the Fest, and I should also add, caused some frustration. We found that a series of sound files (Amiga sound files) e.g. "2001\_drchandra" would not work on all machines. An ERROR #215 resulted. This of course is "Bad Path Name". Well, thanks to Don Berrie, the cause of the problem is clear.

A filename beginning with a numeral e.g "2" is not a legal filename under OS-9 Level 2 (as implemented on the CoCo version). Under OSK such filenames are quite legal. To achieve some OSK compatibility with file names, a patch to the **Kernel** was developed by Kevin Darling (**kml.ar**). Once patched OS-9 level 2 will accept file names beginning with a numeral, 0 to 9. My machine which I took to the Fest, has a patched Kernel, so everything was fine. The sound files named 2001\_drchandra and the like worked O.K. on my CoCo, but NOT a machine with "standard" Kernel.

We will now ensure that ALL files in the P.D. Library are able to be used with a "Standard" OS-9 system. However, this little piece of information may help explain a 215 error if you do happen to come across non-standard OS-9 L2 file names.

Cheers, Gordon.

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## AUSTRALIAN OS9 NEWSLETTER

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### OS-9 COMMUNITY NETWORK Your OS-9 Connection to the Future LET YOUR IMAGINATION RUN WILD

Imagine a database filled with freeware, shareware and public domain files, utilities and programs for OS-9/6809 and 68XXX, and OS-9000. Imagine being able to download this software via modem or order it via mail.

Imagine a database filled with BBS systems, clubs and users groups from Canada, the United States and points across the sea.

Imagine a database filled with OS-9 vendors of both hardware and software for the OS-9 Operating System, offering support when you need it.

Imagine being able to search a database for hardware and software experts to help with your problems. Imagine this same database holding names of companies needing programming and hardware experts.

Imagine receiving a catalog of all the above for the price of a stamped, self addressed envelope. Or, if you have a modem, being able to go to your Regional OS-9 Library and download to your heart's content.

Along with all this, imagine receiving the OS-9 Community NetNews monthly, packed with articles and information on the OS-9 Operating Systems for the

6809, 68XXX and OS-9000.

Imagine no more! As a member of the OS-9 Community Network, all this and more is slowly becoming a reality for you.

The dynamic new OS-9 Community Network is now forming and would like to offer you a charter membership. To become a member, simply send your name, address, phone number and the type of OS-9 system you use, along with any comments or suggestions you might have to help us better serve you.

#### VOLUNTEERS WELCOME!

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#### A SAVE FROM MULTI-VUE

John McGrath from Tamworth sent in this letter:-

Hello, I just thought I'd drop you a line to pass on a little information concerning Multi-Vue for the CoCo3. You probably already know this, but as I've never read about it I thought that it may be of interest.

I've been using the various P.D. files and patches from the OS-9 library to speed up and improve MV's operation, and can see now why they were recommended. Anyway, when I went to build a new bootfile, I listed the "BuildMV" file just to see what Tandy did. Well after loading a file called "pmpts" it used the "SAVE" command several times. This threw me because I thought that you could only get "SAVE" from Level 1 or the Level 2 Development pack. So I did a dir of

oooooooooooooooooooooooooooooooo

Multi-Vue CMDS directory - NO save!!! After rechecking the "buildMV" file I did an ident of various modules until - Ident PMPTS - Gotcha!!! The sneaky B.....s have merged "save" with "pmpts". Was this done to save memory or to trick us into buying more software?

#### ED NOTE:-

Thankyou for your tip John. I hope that this will help somebody out there who is in need of the "save" module. It is very interesting to search through the modules, merged or otherwise, of the various applications and games as this is not the only example of some hidden treasure.

Perhaps other Usergroup members could tell us of some more?

### Thoughts on the MM/1

Well, my MM/1 finally arrived, and I promised Gordon that I would provide an article on the machine, so here goes.

The MM/1 is a 68070 based machine produced by Interactive Media Systems in the US, running OSK version 2.4 by Microware Systems Corp, who are the designers of all of the OS9 series of operating systems. Let me say right at the start that I have nothing whatsoever to do with either IMS or Microware, apart from being a user of their products.

It had reached the stage when I thought that the new machine would never show up. I waited nearly 8 months from the date of order until the box of goodies finally arrived. Was the wait worthwhile? Read on to find out. I ordered the 'kit' form - this was because of shipping costs. A complete system would have been prohibitively expensive to ship from the US to here. The kit consisted of the main processor board, the IO board, the mini-bus connector board, a 1.44 Mb floppy disk drive, assorted cables, mounting hardware, 6 disks of copyrighted and public domain software, including a C-compiler, and an instruction manual to help put it all together. (Very limited though.)

As well as all of the supplied materials, I also needed to supply for myself a case, power supply, keyboard, monitor, SIMMS for added ram, more disk drives, some more connectors for serial ports, sound ports and a keyboard extension, mouse, joystick and etc.

Then it was simply a matter of putting it all together, plugging in my CM8 monitor and turning it on. Just as simple as that. Well almost. The only real problem that I had was that the SIMM chips that I had purchased were the 3-chip PC style of SIMMS. These will NOT work in an MM/1. The SIMMS needed are the 8 (or 9) chip variety used on the Macintosh family of computers. So be warned. BTW, anyone want to buy two 1 Mb 3-chip 60 ns SIMMS?

The machine boots from floppy disk (but boot ROMs are now available - which will allow direct booting from your hard disk), and after running the startup file, just like familiar old CoCo OS9, you are presented with an 80 column white on blue screen that looks suspiciously familiar. The default font is almost exactly the same as a standard CoCo 80 column text screen, and the 40 column font looks almost the same as the equivalent CoCo screen as well.

But the difference appears as soon as you run anything. Mdir for example takes less than 2 seconds to execute and print to the screen, and that is with 84 modules in memory. Disk access is much faster, and hard disk access, whilst somewhat dependant on the type of drive that you use, is similarly much faster. The normal CoCo type windowing escape sequences are also a feature of the MM/1 window driver. In other words, "display lb 32 01" sets the foreground colour to palette slot 1 ... just like the CoCo. Most other escape strings are the same as well.

Then further experimenting shows that the screen is not a text screen at all, but is a graphics screen. There is a mouse cursor (located off screen on bootup), but moving the mouse will reveal the cursor. <Ctrl>-<Alt>-A draws a graphic box which is resizable using the mouse. Resize the box, and press the left mouse button, and the window is contracted (or expanded) to whatever size the box was. <Ctrl>-<Alt>-<Space> selects the whole window and allows relocation of the current window anywhere on the current screen, and pressing the right mouse button switches between windows. You can even have overlapping device windows.

To change the font, simply merge a new font file to any window, and select it with the appropriate escape sequence. Or there is a supplied PD command which will select any file from a fonts directory. Alternatively, include the desired font in your bootfile, and reboot. Then it's permanent.

Most of the commands will be familiar to CoCo users. And they work almost equivalently. Almost all of the commands have a built in help switch (-? or -h), and all of them handle wildcard operators much more elegantly than their CoCo counterparts. Oh yes, they all work very much faster.

There is a large amount of public domain software included with the system, as well as the licensed Microware stuff. One of the programmes is a utility called Gifshow, a GIF file viewer. This is where the MM/1 really starts to show. In fact, some of the GIF files that I have, look better on my MM/1 than they do when displayed on my Super VGA lmb Tseng Labs system on my PC.

At the recent CoCo Fest in Melbourne, I was introduced to FLICKER file display, by Andrew Donaldson. These are hi-res moving pictures and are

displayed by a special (again public domain) file viewer. I can sincerely say that they really defy description. The picture of a piece of rocket powered piece of patio furniture flying down the grand canyon must be seen to be believed.

Yet another innovation is the pcf file manager. This is a system designed to allow the direct reading of "foreign" format disks. One simply creates device descriptors that have the correct parameters for the particular type of disk that needs to be read, and hey presto, you can read (and with most commands) operate on the relevant disk. As an example, on my system, I have device descriptors to read CoCo (yes, the disk format is different), Atari OSK, 720K PC, and 1.44Mb disks, on my system. I simply insert a 1.44Mb PC disk into my drive, do a dir (or chd or copy etc) of/to /hpc1, and I can access the files

directly. Quite neat really.

I guess that there is a down side to all good things. Like all sophisticated computers, the MM/1 would be very tiresome without a hard drive, and it must be a SCSI type drive. These are not as cheap or as easy to obtain as the standard PC ST-506 or IDE type hard drives. As well, there is a woeful lack of documentation with the system. It was my understanding that the system was to be supplied with Microware Professional OSK Users Manuals. Whether or not this is the case is yet to be clarified. I, fortunately, have the Microware manuals that came with my Atari-ST OSK system, and I had also previously purchased an OSK Technical Manual, so I am relatively well off in terms of documentation.

Cheers, Don Berrie

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#### IDE DRIVES ON THE COLOUR COMPUTER

This article is a 'thread' of messages about connecting IDE hard disk drives to the Colour Computer.

67783 27-OCT 14:58 General Information

IDE drives on a CoCo ??????

From: MARTYGOODMAN To: ALL

Recently I succeeded after a MAJOR struggle to help a friend interface a 200 megabyte IDE drive to his older 12 MHz 80286 engine that had older BIOS ROMs which did not support such drives. In the course of this, I learned a number of things about both IDE drives and IBM BIOS hard drive setup tables (for I had to edit the setup table in the BIOS ROM and burn new ROMs for my friend!).

Of possible GREAT relevance to CoCo 3 / OS9 users, tho, was the fact that IDE drive "systems" are designed to appear electronically and at the level of low level disk I/O code to be IDENTICAL to a MFM drive !!! By "IDE systems", I mean the combination of the IDE "controller" card with the ide drive. This just gave me an idea: It might well be the case that a B&B adaptor, plus B&B software would work with an IDE controller hard and IDE drive. Has anyone tried this? With what results?

---marty

67865 29-OCT 19:16 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67783)

From: EMTWO To: MARTYGOODMAN

There has been alot of speculation about that recently. Especially since 8bit MFM controllers have been getting scarce. There was someone on Fido who said B&B was looking into it. I haven't actually asked Chris, since the 80megs I'm using right now have been adequate. Its seems to me( entirely speculation) that it would be a software only type of job.

67893 30-OCT 02:15 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67865)

From: MARTYGOODMAN To: EMTWO

The only hardware problem would be being sure the IDE controller could operate in "8 bit" mode. ---marty

67898 30-OCT 10:54 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67783)

From: WESGALE To: MARTYGOODMAN

Was this IDE controller 8bit? I see it being rather difficult to interface to a 16bit controller with a B&B interface. I have never seen an 8bit one myself, but I know they are out there. I guess it'd be a matter of getting one a trying it out.

Wes Z

67900 30-OCT 13:58 General Information

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RE: IDE drives on a CoCo ?????? (Re: Msg 67898)

From: MARTYGOODMAN To: WESGALE

Good question, about bit width. MOST IDE controllers are 16 bit devices, given how 8 bit PC compatibles are rather seriously ancient, "off the map" "obsolete" devices. However, "XT type" IDE controllers WERE made, and I believe that SOME 16 bit IDE controllers are actually dual 16 / 8 bit devices that sense whether they are in a 16 or 8 bit system and behave accordingly.

---marty

67907 30-OCT 18:51 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67898)

From: MRGOOD To: WESGALE

I've seen several 8-bit IDE controllers for sale in Computer Shopper. In fact, JDR Microdevices sells one for \$80. We're getting a couple for PC's at work. Hugo

67913 30-OCT 19:54 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67893)

From: RDEAN To: MARTYGOODMAN

If you can find any of the old Tandy SmartDrive XT's (I got a 20-Meg one for \$50), they use an 8-bit data bus. They were made by Western Digital (at least the one that I have is), so they should be pretty decent drives.

67914 30-OCT 20:44 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67893)

From: EDELMAR To: MARTYGOODMAN

Re the discussion of IDE controllers. There are several 8-bit IDE host/ adapters on the market. We've tested them all and found the one made by Silicon Valley the best. I suggest staying away from the one made by Seagate - it will only work with their 20/40 meg drives and is slow (it is the one Tandy used early in the game). For those interested in one, we sell them for less than the price MRGOOD mentioned. We don't have any software for them for the CoCo. But the driver for Western Digital's HDO driver will require very little modification to make it (actually the IDE drive) work.

We use this host/adaptor in the SYSTEM IV and have found it to be fast and very reliable. We're also selling them to many schools that need to upgrade or replace their HDs in their MSDOS computers. Only problem we've encountered is with some of the older

BIOS - they can't handle IDE and have to be updated.

One important thing to remember is that these boards are host/adapters - More? not controllers. The controllers are part of the IDE drive.

Ed Gresick - DELMAR CO

67918 30-OCT 21:19 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67898)

From: GREGL To: MARTYGOODMAN

The vast majority of the IDE drives available are 16-bit, although there are many 8-bit to 16-bit IDE cards available (maybe not exactly many, but they are readily available). These cards let you use a standard 16-bit IDE drive in an 8-bit slot (as with the older XT's and Tandy 1000s). Two suppliers right off the top of my head are Hard Drives International and Megahauss.

-- Greg

67919 30-OCT 21:24 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67914)

From: GREGL To: EDELMAR

> One important thing to remember is that these boards are host adapters - > not controllers. The controllers are part of the IDE drive.

Heh. . . I can't imagine calling a small board that consists of address decode logic and buffer/drivers a controller. :-)

--- Greg

67935 31-OCT 01:14 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67913)

From: MARTYGOODMAN To: RDEAN

\$50 for a working 20 meg drive is an OK price. I'm not familiar with the "smartdrive XT's". Did they use an IDE controller, or a mfm one?

---marty

67936 31-OCT 01:22 General Information

RE: IDE drives on a CoCo ?????? (Re: Msg 67914)

From: MARTYGOODMAN To: EDELMAR

Thanks for that interesting post, Ed!

I actually edited a PC BIOS (tho only to change the table for hard drive parameters) on an old 1985 Award

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Bios to make it happily work with a 200 meg (4 head, 2100 cylinders, 49 sectors per cylinder, Alps brand) IDE hard drive.

My understanding is the reason why MOST PC BIOSes can work with IDE drives... even older PC BIOSes... is that, from a hardware and low level software command point of view, the combination of the IDE host adaptor (often improperly called "controller", as you know) and the IDE "drive" (which, as you know, is more properly called, by the old terminology, a "drive plus controller") looks like a mfm drive system.

---marty

67937 31-OCT 01:22 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67918)  
From: MARTYGOODMAN To: GREGL

Ever hear of anyone using an 8 bit IDE drive controller (or a dual 8 / 16 bitter in 8 bit mode) with a B&B adaptor on a CoCo???

---marty

67939 31-OCT 03:15 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67918)  
From: LMCCURE To: GREGL

I believe there is one readily available IDE drive that handles both 8-bit and 16-bit I/O: the Seagate ST-351AX, which typically sells mailorder for \$179-\$189.

67943 31-OCT 09:01 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67783)  
From: DION To: MARTYGOODMAN

67945 31-OCT 13:11 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67935)  
From: RDEAN To: MARTYGOODMAN

They have an imbedded 8-bit IDE controller. I'm still trying to locate someone who has a computer that I can test it in. I'm not going to bother with the headache of trying to get it to work with my CoCo unless someone solves the problem (reasonably \$) for me.

67946 31-OCT 13:36 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67900)  
From: WESGALE To: MARTYGOODMAN

I am wondering what the possibility would be for

someone to develop an IDE controller for the COCO and what the response would be to that.

I think that'd be the easiest solution, but would it be worth the effort?

---Wes

67951 31-OCT 15:23 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67945)  
From: MARTYGOODMAN To: RDEAN

I keep wondering if an IDE drive system with appropriate mapping of its heads and cylinders (such as older 40 meg IDE drives that mimiced older MFM drives in terms of head and cylinder and sector per track mapping) would not work right off the bat with B&B stuff.

---marty

67952 31-OCT 15:25 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67946)  
From: MARTYGOODMAN To: WESGALE

(1) An IDE controller would not be difficult to make, considering that all it is a simple, glorified parallel port. It's not really a controller at all... just a "host adaptor"... much like the "host adaptors" used by RGB and Disto hard drive systems.

(2) I don't think the CoCo market could support the cost of development of even a simple hardware project at this time.

---marty

67958 31-OCT 18:41 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67939)  
From: GREGL To: LMCCURE

The 8-bit IDE drives (or auto-switching 8/16-bit) are commonly available in 20 and 40MB capacities. Those drives with capacities larger than 40MB are almost exclusively 16-bit. Indeed, many of those 8-bit drives were made for Tandy (such as the Seagate and Western Digital models) for use in the later-model Tandy 1000 line.

--- Greg

67990 1-NOV 17:03 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67783)  
From: HARLAND To: MARTYGOODMAN



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## AUSTRALIAN OS9 NEWSLETTER

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68010 1-NOV 23:06 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67951)  
From: AJMLFCO To: MARTYGOODMAN

I am trying to understand the interest in IDE. I know that MFM controllers are obsolete, which is also making it harder to find replacement parts. There is another part which should be considered for use in the B&B adapter: the Seagate ST-01. I used one in my IBM-XT. This is a simple 8 bit SCSI interface which apparently made a SCSI drive appear the same as a MFM drive to my old XT. ST-01's are about \$10 to \$15. I had it hooked up to my ST-157N hard drive. I am now using the ST-157N in my CoCo, interfaced through a Disto 4-n-1.

I saw a message from DISTO saying they were back in business.

---Allen

68022 2-NOV 04:14 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67952)  
From: WESGALE To: MARTYGOODMAN

Yeah, I don't think it'd support the cost of the development either.

It'd have to be more of a 'hobby' thing, just a home-breq project of sorts I guess. It is an interesting idea at least. My system is running just fine, so there is no real need for me personally to attack such an ordeal...

---Wes

68034 2-NOV 14:43 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67990)  
From: MARTYGOODMAN To: HARLAND (NR)

Er... you left me a blank message (msg 67990). Care to try again?

---marty

68045 2-NOV 19:43 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 68010)  
From: DSRTFOX To: AJMLFCO (NR)

Alan, IDE drives have the controller built into the drive similar to embedded SCSI drives (like the Seagate N series you have). They are much cheaper than MFM drives, and are easier to find. Why use an SCSI adapter in a B&B interface? Seems an expensive way to go! The MFM cards AREN'T hard to find, nor MFM drives... though smaller ones are usually rebuilds. The IDE drives cost about the same as MFM, and you don't need a controller. The IDE "controller" is merely an interface adapter, much like the B&B itself is. The best thing to do is build a new adapter, which shouldn't be hard at all. The adapter wouldn't be any larger than a game cartridge, as few chips are used. Would need an IDE pinout to start with, possibly even an XT IDE adapter and schematic also.

68075 3-NOV 01:14 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 67937)  
From: SALZARD To: MARTYGOODMAN

The Tandy Smard Drive is an 8bit IDE host adapter. The drive is an IDE. We bought one to put into a CoCo with their special XT host adapter card but the old XT needed the hard drive more than the coco....so I'm not sure if it can be made to work with the CoCo.

HOWEVER....Chris Burke stated at the PNW CoCoFest back in July that he would have IDE drivers/software available for the Chicago CoCo FEST to go with his CoCo XT interface card!!!!

68091 3-NOV 19:01 General Information  
RE: IDE drives on a CoCo ?????? (Re: Msg 68075)  
From: MARTYGOODMAN To: SALZARD (NR)

Ah HA! If Chris Burke is working on it, and if he follows thru, it should be available. I would GUESS that it would not be that difficult for Chris, the designer of the system and author of the drier software, to modify it to handle IDE drives. Indeed, as you know, it was my speculation that it might be possible to make a B&B system designed for MFM drives work with little or no mods with an 8 bit IDE host adaptor and drive.

---marty

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## AUSTRALIAN OS9 NEWSLETTER

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### DISTO IS BACK

This message was on the OS9 echo recently. Great news!

From: IN%"GREG@DELPHI.COM" "Greg Law"  
To: IN%"COCO@pucc.Princeton.EDU" "Multiple recipients of list COCO"  
Subj: CRC/Disto

For those of you that haven't heard yet, CRC/Disto is back in business and is well stocked to take your orders. (I got this information from Tony in a message posted on Delphi -- disto@delphi.com.)

-- Greg

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### FROM THE LIBRARIAN

As promised last month, here are more modules, with their CRC numbers, to help you to identify them quickly, should they appear in your boot file.

Module	CRC	Origin	Comments
cc3disk	759161	OS9 Level II System Disk	cc3disk.dr
cc3disk	A27877	???	
cc3disk	E11F29	Public Domain Library #02	
cchdisk	A50917	Disto 4-in-1	cchdisk_disto.dr
cchdisk	A1199D	Disto 4-in-1	cchdisk_sasi_LII.dr
cchdisk	B7AA8D	Disto 4-in-1	cchdisk_scsi_LII.dr
HO	9E5ACC	Disto 4-in-1	h0_4in1rodime652.dd
HO	AE6497	Disto 4-in-1	h0_4in1SASI.dd
HO	9E5ACC	Disto 4-in-1	h0_4in1SCSI.dd
RO.dd	842234	Window_Writer	
Ram.dr	3B8F8A	Window_Writer	
shell	B8E5A3	Public Domain #08	(Shellplus Shell121)
rbf	EFBE13	OS9 Level II System Disk	RBF.mn (edition 28)
rbf	E1A177	Public Domain #11	rbf29.ipc
rbf	4B1153	Public Domain #11	rbf30.ipc

Next month, we will have clocks, clocks (and more clocks!).

Happy computing

Jean-Pierre

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## AUSTRALIAN OS9 NEWSLETTER

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### PLAY

Original programme by - Kevin Darling.  
Revision by - Dave Philippsen.  
Revision by - Brian C White.  
Updated yet again by - "a smart programmer"  
Play revision 4 - Zygo Blaxell, major contributor.

### Play Version 5

This version of Play adds a couple of features that I thought would make this a more useful program. I added a new option to allow output to be a full 8 bits if an Orchestra 90 is in the system and I fiddled a little bit with the p option to allow operation with no output to the screen.

The "o" option works like this:

If it is left out, the data is ANDed to its 6 most significant bits and output through Coco's internal 6 bit DAC, the same as it always was.

If the o is included as an option then all 8 bits of the output are sent to the left channel of the Orchestra 90's 8 bit DAC. The improvement in fidelity is quite noticable.

The "p" option works a little differently now:

If it is left out, there is nothing sent to the screen at all, not even the memory dots. This allows Play to be called by a shell script file or another program without fouling up the screen. I use it in my startup file to play a startup sound like the Mac guys do. Another use might be to play an error sound.

If the p is included as an option then a new message reporting the destination DAC appears. The reading file message, dots, releasing memory message, dots, and again prompt all follow and work the same as before.

### Technical Stuff

It is supposed to be against the OS9 rules for a program to modify itself but this program does it anyway. One reason for this rule is to allow only one copy of a program to be in memory even though it may running more than once. Play is a special case since it is not likely that it would be running more than once at any given time. Someone else wrote a bit of code that modifies the program before I did anyway so I didn't feel TOO guilty about doing a little more.

Each time Play runs, it writes into itself the correct 6 or 8 bit data mask for the appropriate output DAC. It also writes into itself the appropriate output DAC address. This is done for two reasons: First, the timing of the output loop is critical. Since the mask and address are both different for the different outputs, the overhead of deciding which to use was unacceptable. Writing them directly into the code avoids having to make the loop any longer. Second, it can't be known beforehand whether the program was previously loaded into memory or not. Rewriting these values each time the program runs insures that the mask and address are in agreement with the command line options. The alternative to doing this was to duplicate the entire play loop. Since the code was already self modifying, I thought it was most reasonable to take this approach.

I thought the original version of Play was the neatest thing since sliced bread and my hat is off to those who wrote it and improved it and gave me something to work with.

- Bob Budewitz

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### ED NOTE:-

All versions of the "Play" programme are available from the UGCAT P.D. library together with a selection of sound files.

Please send requests including formatted disks, copy fee and return postage to our librarian.